IN THE CLAIMS

1. (Currently amended) A remote-plasma atomic film deposition apparatus comprising:

a reaction chamber in which wafers are loaded;

an exhaust line for exhausting gas from the reaction chamber;

a first reactive gas supply unit for selectively supplying a first reactive gas to the reaction~~ant~~ chamber or the exhaust line;

a first reactive gas transfer line for connecting the first reactive gas supply unit and the reaction~~ant~~ chamber;

a first bypass line for connecting the first reactive gas supply unit~~line~~ and the exhaust line;

a radical supply unit for generating corresponding radicals by applying plasma to a second reactive gas and then selectively supplying the radicals to the reaction~~ant~~ chamber or the exhaust line;

a radical transfer line for connecting the radical supply unit and the reaction~~ant~~ chamber;

a second bypass line for connecting the radical supply unit and the exhaust line; and

a main purge gas supply unit for supplying a main purge gas to the first reactive~~ant~~ gas transfer line and/or the radical transfer line,

wherein the radical supply unit comprises:

an MFC 2 for controlling the flow rate of the second reactive gas;

an MFC 3 for controlling the flow rate of an inert gas;

a remote plasma generator to which the MFC 2 and the MFC 3 are connected such that the second reactive gas and/or the inert gas are fed to the remote plasma generator, the remote plasma generator generating corresponding radicals by applying plasma to the second reactive gas and/or the inert gas;

a second path conversion unit for enabling the generated radicals to selectively flow into the radical transfer line and/or the second bypass line;

an open/close valve installed between the MFC 2 and the remote plasma generator; and

an open/close valve installed between the MFC 3 and the remote plasma generator.

2. (Original) The apparatus of claim 1, wherein the first reactive gas supply unit

comprises:

a source container filled with a predetermined amount of liquid first reactant which will be the first reactive gas;

an MFC 1 for controlling the flow rate of an inert gas fed into the source container; and

a first path conversion unit for enabling the inert gas or the first reactive gas to selectively flow into the first reactive gas transfer line or the first bypass line.

3. (Canceled)

4. (Currently amended) The apparatus of claim 1[[3]], wherein the radical supply unit further comprises a third bypass line for enabling the second reactive gas to selectively flow through the MFC 2 into the second bypass line.

5. (Original) The apparatus of claim 1, wherein the main purge gas supply unit comprises:

an MFC 4 for controlling the flow rate of the main purge gas; and

a third path conversion unit for enabling the main purge gas to flow into the first reactive gas transfer line or the radical transfer line.

6. (Currently amended) An atomic film deposition method using the remote-plasma atomic film deposition apparatus of claim 1, the method comprising:

forming a thin film on a substrate loaded in the reaction chamber by repeatedly performing a first reactive gas feeding step in which the first reactive gas is fed into the reaction~~ant~~ chamber and a first reactive gas purge step in which the first reactive gas, fed into the reaction~~ant~~ chamber, is purged, in a state where a roughing~~luffing~~ valve positioned between the reaction~~ant~~ chamber and the exhaust line remains open, gases flowing through an inner point A of the first reactive gas supply~~path conversion~~ unit and an inner point B of the radical supply~~second path conversion~~ unit continue to flow into the reaction~~ant~~ chamber or bypass lines, and radicals are fed into the reaction~~ant~~ chamber.

7. (Currently amended) The method of claim 6, after depositing a thin film, further

comprising injecting radicals and an inert gas into the reaction~~ant~~ chamber to thermally treat the thin film, wherein the radicals are formed of at least one selected from the group consisting of O, N, H, OH, and NH and a combination thereof.

8. (Canceled)

9. (Canceled)

10. (Canceled)

11. (Currently amended) An atomic film deposition method using the remote-plasma atomic film deposition apparatus of claim 1, the method comprising:

forming a thin film on a substrate loaded in the reaction chamber by repeatedly performing a radical feeding step in which radicals are fed into the reaction chamber, a radical purge step in which the radicals are purged from the reaction chamber, a first reactive gas feeding step in which the first reactive gas is fed into the reaction chamber, and a first reactive gas purge step in which the first reactive gas is purged from the reaction~~ant~~ chamber, in a state where a roughing~~luffing~~ valve positioned between the reaction~~ant~~ chamber and the exhaust line remains open and gases flowing through an inner point A of the first reactive gas supply~~path conversion~~ unit and an inner point D of the radical supply unit continue to flow into the reaction~~ant~~ chamber or bypass lines,

wherein the radical purge step comprises injecting only a radical corresponding to the inert gas (excluding the second reactive gas), ~~the flow rate of~~ which flows through the remote plasma generator~~is controlled by the MFC 3 of the radical supply unit~~, into the reaction chamber by way of the radical transfer line.

12. (Original) The method of claim 11, wherein the sum of the flow rate of the inert gas flowing through the first reactive gas transfer line and the radical transfer line is maintained at a constant level during the first reactive gas purge step.

13. (Currently amended) The method of claim 11[[13]], after depositing a thin film, further comprising injecting radicals and an inert gas into the reaction~~ant~~ chamber to thermally treat the thin film, wherein the radicals are formed of at least one selected from the group consisting of O, N, H, OH, and NH and a combination thereof.